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## Education

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### University of Cambridge / Integrated Masters

*Oct 2020 - June 2025*

III: Mathematical physics and statistical computing  
II : Physics, including Theoretical Physics 1, Theoretical Physics 2, Computing Project  
IB: Physics, Maths  
IA: Physics, Maths, Physiology, Materials Science

### Self Study / A-level

*April 2019 - July 2019*

Biology (A)

### The Blue School Sixth Form / A-level

*Sept 2016 - July 2018, Wells (Somerset)*

Mathematics (A\*), Further Mathematics (A\*), Chemistry (A\*), Physics (A\*)

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## Experience

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### Gurdon Institute/Cambridge Centre for Physical Biology / Researcher

*Summer 2024*

- Wrote a computer simulation of collective cell motion based on research papers
- Worked with minimal supervision, selecting Go as an appropriate programming language
- Highlighted several mathematical and algorithmic mistakes in the literature
- Analysed scaling of possible algorithms
- Argued for and implemented an improved approach (Delaunay Triangulation)
- Refactored existing code to improve clarity
- Advised other groups carrying out similar research

### Cambridge Centre for Carbon Credits / Researcher

*Summer 2023*

- Produced a pipeline processing data from an SQL database into a geospatial format
- Optimised code around a library bug - reducing memory consumption from 16GB to ~1GB
- Ensured the code is accessible via GitHub and well commented

### Homerton College / Student Ambassador

*Summer 2022*

- Assisted in the college open day and ran tours throughout Summer

### Cambridge Admissions Office / eCAMbassador

*July 2021 - January 2022, Remote*

- Mentored university applicants from disadvantaged backgrounds, sharing insight and providing feedback on personal statements

### St Michael's Mount / Guide

*July 2021 - September 2021, Cornwall*

- In addition to my role guiding visitors, I completed a voluntary first-aid course and put it to use

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## Experience

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### Teamline / Year in Industry (YINI)

*Aug 2019 - Aug 2020, Cambridge*

- Wrote API based code in Python for a R&D project
- Automated visual testing with OpenCV-Python, using Linux tools to access hardware information
- Presented test results to other members of the team
- Raised a major concern directly with my manager, preventing flawed units being shipped to customers
- Organised a group entry into the Google Code Jam competition for all the interns/grads
- Completed the hardware section of Nand2Tetris, which has given me a basic understanding of computer architecture

### The Blue School / Teaching Assistant (maths dept.)

*Oct 2018 - April 2019, Wells (Somerset)*

- Coordinated with teachers to support GCSE pupils in class
- Planned and delivered small group lessons

### Wells Cathedral Catering / Catering Assistant

*June 2016 - August 2018, Wells (Somerset)*

- Part-time job during my A-levels

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## Volunteering & Awards

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- Selected to be Vice-Captain for University Challenge 2025, representing Homerton College
  - Oxford UNIQ+ summer research scholarship 2024 — declined due to an alternative offer
  - Martingale Scholarship 2024-2025 — declined as deferral was not possible, reapplying now
  - Wrote and delivered a presentation to Oxbridge applicants at my former school
  - Undergraduate year-rep for Part IB Physics, participating in committee meetings on undergraduate teaching. I highlighted the cohort's desire for worked examples to be used as an educational tool and this is now more widely being implemented
  - Competed for Homerton College Boat Club
  - Student of The Year at J. Burgess' Professional Martial Arts
  - Volunteer at Glastonbury Festival
  - I'm also a keen runner and find this helps me to de-stress and think more clearly. I recently ran in the Chariots of Fire relay race, placing 12th out of ~ 200 teams